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TEN NEW FLEA-BEETLES FROM CUBA

(COLEOPTERA, CHRYSOMELIDAE)

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The material from which these ten new species of Alticinae are described was obtained by Fernando de Zayas of Habana, Cuba. He has been actively collecting specimens of all groups of insects in Cuba for many years until he now has a collection of over 400 boxes of mounted material. In time this may become the nucleus of a Cuban national collection.

Oedionychus orientensis, new species

(Figure 1)

About 6 mm in length, oblong oval, shiny, very finely punctate, deep yellow brown with the body beneath a little deeper in coloring, the five terminal antennal joints dark, the elytra with small dark spots, one on the humerus, one in the middle of each elytron below the scutellum, another below middle, and another near apex, sometimes one in middle at side, all these spots except the humeral one very small and sometimes absent in part or entirely.

Head with interocular space about one-third width of head, occiput shiny and smooth except for a row of punctures near eye running down to frontal tubercles, and ending in a large fovea near eye; interantennal area knob-like, lower front short and sharply declivate, mouthparts small. Antennae filiform, not extending much below humeri, pale with joints 7 to 10 and sometimes 11 dark. Prothorax more than twice as broad as long, somewhat alutaceous and very finely punctate, dark yellowish brown with faint traces of two spots in middle anteriorly in some specimens. Scutellum deep brown. Elytra smooth, polished, very indistinctly but moderately densely punctate; humeral prominences marked by a short intrahumeral sulcus; deep yellow-brown with a piceous spot on humeri, and on each elytron three or four small and usually inconspicious dark spots, one below scutellum, one at middle on the side, another in line with the basal one, and another near apex. In one specimen the spot at the side lacking, in another there are no spots except on the humerus. Body beneath a little deeper in color. Tibiae and tarsi pale. Length 5.5 to 6.2 mm.; with 2.8 to 3 mm.

Types.—Type female, U.S.N.M. Type No. 64661 and 5 paratypes, two in collection of F. de Zayas, collected at El Johnson, Moa, Oriente Province, Cuba, in June 1954, by F. de Zayas and Pastor Alayo.

Remarks.—This differs from *Oe. complanata* Suffrian in having usually more spots, in having punctate elytra, and in being somewhat larger. Suffrian described *Oe. complanata* as having only one spot near the middle of the elytra, and no mention is made of a dark covering of the humerus. In these half dozen specimens of *Oe. orientensis* that I have examined, the spotting is somewhat variable; the spots near the base may be small or entirely lacking, one specimen is pale except for the humeral spot which appears in all the specimens. Unfortunately no male has been examined.

Oedionychus zayasi, new species

(Figure 2)

About 5 mm. in length, elongate oblong, not shiny, dull strawcolored, the 8th and 9th antennal joints and sometimes the 10th, dark, the terminal joint usually pale; scutellum deeper brown.

Head with interocular space less than half width of head, occiput smooth, a row of punctures extending from a fovea on inner margin of eye to frontal tubercles, the frontal tubercles distinctly marked, interantennal area produced in a tiny knob, lower front sharply declivate from antennal sockets. Antennae extending below humeri, slender, becoming slightly thicker distally, pale with joints 8 to 10 deeper in color, often the terminal joint pale. Prothorax more than twice as wide as long at base, not very convex, alutaceous, very indistinctly punctate, entirely pale yellow brown. Scutellum deep brown. Elytra smooth, alutaceous, with a short intrahumeral sulcus, surface very finely punctate, entirely pale yellow brown. Body beneath and legs yellow brown with breast a little deeper brown. Length 4.6 to 5.7 mm.; width 2.3 to 2.8 mm.

Types.—Type male, U.S.N.M. Type No. 64662, and 3 paratypes, two in Zayas' collection, all from the Peninsula Guanacahabibes, Pinar del Rio Province, Cuba, collected in July 1955 by Fernando de Zayas.

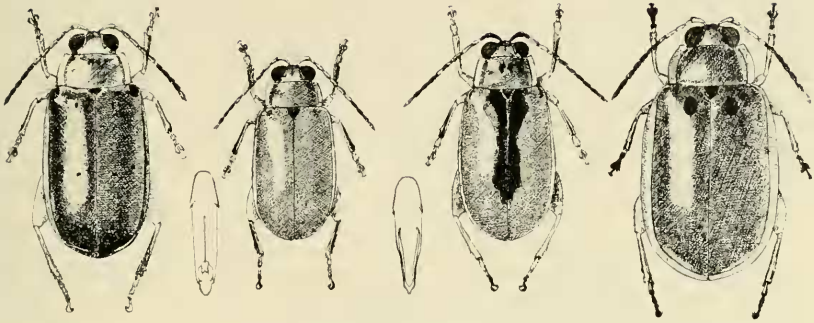
Remarks.—There is no other Cuban species of *Oedionychus* yet described with this dull pale yellow-brown color.

Oedionychus cristalensis, new species

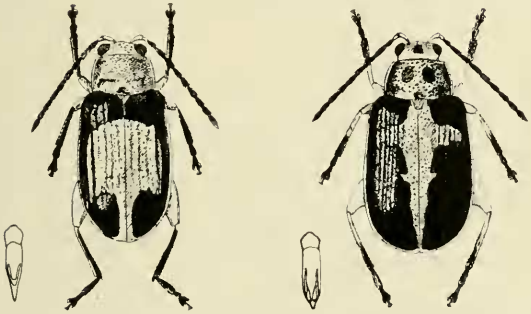
(Figure 3)

About 5 mm. in length, oblong oval, finely alutaceous although somewhat shiny, very finely punctate, yellow-brown, the antennae with the two basal and five apical joints dark, prothorax deeper brown with two dark areas in the middle anteriorly, elytra with a wide, sinuous, dark reddish brown, sutural vitta not extending to apex, breast darker than rest of undersurface.

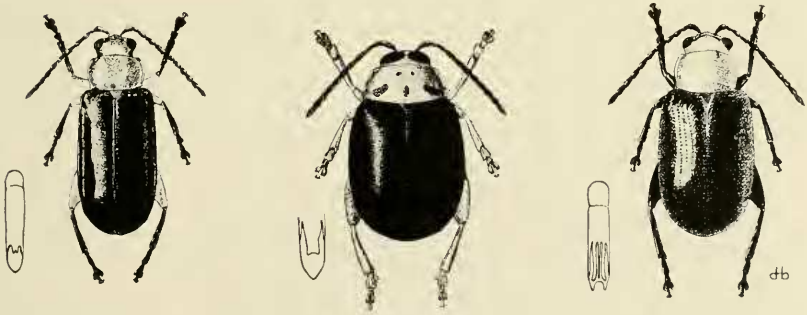
Head with interocular space about one-fourth the width of the head, occiput smooth except for a row of punctures extending from a fovea on inner side of eye down to frontal tubercles, frontal tubercles distinctly marked, a knob between antennal sockets, lower front sharply declivate, mouthparts small, upper part of head yellow brown, lower gradually deepening in color. Antennae filiform, not



1. Oedionychus orientensis 2. Oedionychus zayasi 3. Oedionychus cristalensis 4 Oedionychus amplilimbatus



5. Hemilactica clara 6. Hemilactica crucifera 7. Hemilactica stomachosa (Suffrian)?



8. Systena plicata 9. Megistops coeruleipennis 10. Cyrsylus cubensis

extending to middle of elytra, the two basal and five distal joints darker than joints three to six. Prothorax about twice as wide as long at base, narrowed in a straight line anteriorly, dull dark yellowish brown with two darker areas in middle near anterior edge; surface alutaceous and finely punctate. Scutellum dark. Elytra moderately shiny although finely alutaceous, very finely punctate, yellow brown with a wide dark reddish brown sutural vitta narrowing near middle and then widening again, not extending below apical curve. Body beneath pale yellow brown with the breast darker brown, legs entirely pale. Length 4.8 mm.; width 2.5 mm.

Type.—Male, in collection of F. de Zayas, from Sierra del Cristal, Oriente Province, Cuba, collected in June 1956 by Fernando de Zayas.

Remarks.—The sinuate sutural vitta on the elytra distinguishes this species from any yet described from Cuba.

Oedionychus amplilimbatus, new species
(Figure 4)

About 6 mm. in length, elongate oblong oval, somewhat shiny although finely alutaceous, dirty dark yellow brown, the elytra with two dark brown spots near base, the last six antennal joints and tarsal joints deep brown; explanate margin unusually wide.

Head with interocular space about one-third width of head, head smooth and alutaceous over occiput, a row of depressed punctures from inner margin of eyes down to frontal tubercles; frontal tubercles well marked, a knob-like prominence between antennal sockets, lower front sharply declivate and short, whole head dirty dark yellow brown. Antennae not extending much below humeri, filiform with the outer joints a little broader; the last six joints deeper brown. Prothorax approximately twice as broad as long, not very convex with wide explanate margin, surface alutaceous, very faintly punctate, dirty yellow brown. Scutellum deeper brown. Elytra rather flat, humeri not very prominent, explanate margin wide, surface alutaceous, very faintly and finely punctate, dirty yellow brown with a large dark brown spot near suture and below scutellum, on each elytron. Body beneath entirely yellow brown, the legs yellow brown with the tarsal joints deeper brown. Length 6.3 mm.; width 3.4 mm.

Type.—Female, in collection of F. de Zayas, from Peninsular Guanacahabibes, Pinar del Rio Province, Cuba, collected in July 1955 by Fernando de Zayas.

Remarks.—The unusually wide explanate margin and the two elytral spots distinguish this from other Cuban species.

Hemilactica clara, new species
(Figure 5)

About 3.5 mm. in length, oblong oval, shining, distinctly punctate, the prothorax with traces of basal transverse sulcus, the elytra with irregular costae and a submarginal fold; pale reddish brown, the elytra with a basal and apical metallic blue or green spot connected along the side with a dark metallic band; antennae, tibiae and tarsi dark.

Head with interocular space half its width, strongly punctate, except on frontal tubercles, carina somewhat blunt and rounded, not sharply defined. Antennae

extending well below humeri, 3rd joint shorter than 4th, the two basal joints pale, the remainder dark piceous. Prothorax somewhat narrowed apically with slightly curved sides, traces of a basal sulcus in the form of a depression on each side and one in the middle, surface distinctly and densely punctate, a little bumpy, entirely pale reddish brown. Scutellum pale. Elytra with a strong lateral submarginal fold and numerous costae, the interspaces with obsolete punctures; shining, pale reddish brown, with a broad basal metallic blue or green band connected broadly along the sides with a large apical spot. Body beneath pale reddish brown, femora reddish brown, tibiae and tarsi piceous. Length 3 to 4.5 mm.; width 1.5 to 2 mm.

Types.—Type male, U.S.N.M. No. 64663, from La Breña, Moa, Oriente Province, Cuba, and 10 paratypes, 2 in collection of F. Zayas; also one specimen collected at Piloto, Moa, Oriente Province, Cuba, all collected by F. de Zayas and Pastor Alayo in June and July 1954.

Remarks.—As in *H. stomachosa* (Suffrian) there is a strong lateral fold on the elytra. The aedeagus is similar in shape to that of *H. rugosa* Blake in having a long pointed tip. This species is entirely different from any of the others in its elytral pattern.

Hemilactica crucifera, new species

(Figure 6)

About 3 mm. in length, oblong oval, shining, distinctly punctate, the prothorax with traces of basal sulcus at sides and middle, the elytra with several more or less distinct costae, pale reddish brown with a median occipital piceous spot on head, four large dark spots having a bluish lustre across anterior half of prothorax, and the elytra dark violaceous except the pale margin and a median cross-shaped pale marking; legs and undersurface pale with the tibiae at apex, and tarsi darker brown, antennae mostly dark brown.

Head with interocular space about half width of head, except in the middle of the lower front head densely and coarsely punctate; a broad rounded keel from between antennal sockets downward; pale reddish brown with an oblong piceous spot on occiput. Antennae extending well below humeri, 3rd joint half as long as 4th, 4th and 5th slightly longer than remainder; the two basal joints pale, remainder deep brown. Prothorax wider at base, narrowed straightly to apex; traces of a basal sulcus in the limiting ends and depression in the middle of base; surface shining and coarsely and irregularly punctate; pale reddish brown with four elongate piceous spots having a faint bluish lustre across anterior half of prothorax, the outer ones extending to but not covering explanate margin. Scutellum pale. Elytra shining, rather coarsely and irregularly punctate in the pale area, and between costae, and punctures becoming obsolete after the middle; humeri well marked, several short costae down middle of the elytra; a median cross-shaped pale reddish area down suture, and the elytral margin also pale, rest of elytra deep blue. Body beneath pale reddish brown, legs pale with the posterior half of tibiae and tarsi deeper brown; posterior femora enlarged, spur at tip of hind tibiae. Length 3.2 mm.; width 1.8 mm.

Type.—Male, in collection of F. de Zayas, from Sierra del Cristal, Oriente Province, Cuba, collected in June 1956 by F. de Zayas.

Remarks.—The spotting of the prothorax is similar to that of

H. pulchella Blake, but the markings of the elytra as well as the shape of the aedeagus are different.

Hemilactica stomachosa (Suffrian)?
(Figure 7)

Haltica stomachosa Suffrian, Archiv. f. Naturg., vol. 34, pt. 1, 1868, p. 204.

About 3.5 mm. in length, oblong oval, shining, the elytra with numerous costae; reddish brown, the elytra violaceous blue, the breast and abdomen deep brown.

Head with interocular space approximately half width of head, strongly and densely punctate, except on tubercles, the carina broad, entirely reddish brown. Antennae extending well below humeri, 3rd joint shorter than 4th, the two basal joints paler than the deep brown remainder. Prothorax not twice as broad as long with sides somewhat narrowed apically, traces of a basal sulcus in the limiting depressions on each side and a median basal depression; surface shiny, finely punctate, pale reddish brown. Scutellum pale reddish brown. Elytra with seven distinct costae in the female, the costa from humerus down side developed more than in male into a lateral fold; shining, indistinctly punctate, entirely deep violaceous blue. Body beneath and legs pale reddish brown with the breast and abdomen deeper brown. Hind femora enlarged, a tiny spur at apex of hind tibiae. Length 2.8 to 3.8 mm.; width 1.4 to 1.8 mm.

Remarks.—F. de Zayas has collected five specimens of what may be Suffrian's *Haltica stomachosa*, four at Pan de Guajaibon and the other at Suajaibon, Pinar del Rio Province, Cuba, although they do not entirely correspond to the Suffrian description. Suffrian described the elytra as having a ferrugineous margin and the underside as having the breast and abdomen blue-black. In these specimens the margin is not ferrugineous but dark as the rest of the elytra, and the underside is simply a deeper brown. Since I have never seen *H. stomachosa* in any collection, and since I have already illustrated the rest of the genus, I include this species.

Systena plicata, new species
(Figure 8)

Between 5 and 6 mm. in length, elongate oblong, shining, the prothorax and elytra thickly punctate, the elytra with a strong lateral fold running down the side from the humerus; reddish brown with deeper brown antennae, tibiae, tarsi and abdomen, elytra shining dark blue or bluish green.

Head with interocular space a little more than half width of head, well rounded over occiput, vertex finely and densely punctate, a line running across over tubercles between eyes, carina between antennal sockets short and somewhat produced; entirely pale reddish brown. Antennae deep brown, third joint a little shorter than fourth or fifth, remainder subequal to third. Prothorax not quite twice as broad as long, with rounded sides, obtuse anterior angles and a tooth at basal angles; surface shining, densely and finely punctate, entirely pale reddish brown. Scutellum reddish brown. Elytra rather flat, with a distinct lateral fold, more developed in the male, from humerus nearly to apex; intrahumeral sulcus short but well marked; surface shining, and densely and strongly punctate, a

slightly depressed line parallel to and near suture; dark blue or bluish green. Body beneath with anterior coxal cavities closed, reddish brown, the abdomen deeper brown, femora reddish, tibiae and tarsi brown; tibiae with a sulcate line, a spur on hind tibiae and tiny spine on anterior tibiae, claws appendiculate. Length 4.4 to 5.5 mm.; width 1.7 to 2 mm.

Types.—Type male, U.S.N.M. Type No. 64664, and 2 paratypes, both female, one in the collection of F. de Zayas, taken by him in the Sierra del Cristal, Oriente Province, Cuba, in June 1956; also two specimens taken at Morrillo, Matanzas, near Rio San Juan, in June 1949, by F. de Zayas.

Remarks.—The strong lateral fold on the elytra distinguishes this species. It does not correspond with Suffrian's description of *S. coeruleipennis* in this regard, and the color pattern is a little different. The aedeagus is typical of *Systena*.

Megistops coeruleipennis, new species

(Figure 9)

About 3 mm. in length, oval, alutaceous, feebly shining, pale reddish brown with dark brown antennae, the pronotum having indistinct spotting, the elytra shining deep blue.

Head with the large eyes nearly meeting on vertex, frontal tubercles squeezed between eyes and a narrow carina down lower front; entirely pale reddish brown. Antennae deep reddish brown, 3rd joint shorter than 4th, 4th and 5th joints long, remainder a little shorter and subequal. Prothorax widening from apex to base, broadly truncate at apical angles, disk reddish brown with two faint darker brown areas, one on either side near anterior middle, and a larger area on either side near base and margin, and a less well defined one in middle of base. Scutellum deep brown. Elytra broad and more convex, deep blue, faintly shiny, finely alutaceous and very finely punctate. Body beneath entirely pale reddish brown, shining. Posterior femora much enlarged, posterior tibiae with the usual broad double-tipped spur. Length 3.2 mm.; width 1.8 mm.

Type.—Male, U.S.N.M. Type No. 64665, taken at Cumanayagua, Las Villas Province, Cuba, in January 1954, by F. de Zayas. One other specimen, taken at Corralillo, near Guao, Las Villas Province, June 1954, by F. de Zayas, is in his collection.

Remarks.—This is the second species of *Megistops* with blue elytra to be described from the West Indies. The first, *M. dissita* Blake, (Bull. Brook. Ent. Soc., vol. 26, 1931, p. 81) was described from Haiti, and is similar in color but the eyes are placed farther apart and the antennae and scutellum are pale instead of deep brown.

The gender of the word *Megistops* is feminine and, contrary to the *Catalogus Coleoptorum* which lists all the species with masculine endings, the specific endings should be feminine.

Cyrsylus cubensis, new species

(Figure 10)

About 4.5 mm. in length, oblong-oval, shining, elytra striately punctate, head and prothorax pale reddish or yellowish brown, antennae, legs and undersurface black, elytra shining deep blue or bluish green.

Head with interocular space more than half its width, occiput shining, smooth, well rounded, impunctate, a line runing across front above antennal sockets to margin of eye, carina between antennal sockets rounded, not much produced; head entirely pale. Antennae entirely shining black, 3rd joint shorter than 4th, 5th a bit longer than 4th, remainder subequal. Prothorax about twice as wide as long with rounded sides and with obtusely cut apical angles and smooth sharp tooth at basal angles, disk smooth, convex, surface shining, very finely punctate and entirely pale yellowish or reddish brown. Scutellum deep chestnut brown. Elytra with the striate punctures strong in basal half but becoming much reduced towards apex; between these rows of coarser punctures are finer ones; the lateral margin not wide, in fact scarcely discernible, epipleura wide along side but disappearing near apex. Body beneath with prosternum and area about front of middle coxae pale, remainder shining black or piceous, legs entirely dark; anterior coxal cavities closed, hind femora enlarged, a spur at end of hind tibiae, tibiae not channelled. Length 4 to 5.3 mm.; width 1.8 to 2.4 mm.

Types.—Type male, U.S.N.M. Type No. 64666, and 6 paratypes, two in the collection of F. de Zayas who collected them in the Sierra del Cristal, Oriente Province, Cuba, in June 1958.

Remarks.—Three species closely resembling each other have been described from the West Indies—*C. cyanipennis* (Weise), from the Virgin Islands, *C. hispaniolae* Blake from Haiti, and *C. montserrati* Blake. Only *C. hispaniolae* is as large as *C. cubensis*. All of them except *C. cubensis* have pale legs and undersurface and paler antennae, whereas in *C. cubensis* the legs, undersurface, and antennae are shining black. The aedeagus in all is strikingly similar and unusual in having a double tip.

INSECTS ASSOCIATED WITH MILKWEED

There appears to be very little published information about milkweed insects except for scattered references to the well-known: *Oncopeltus fasciatus* (Dall.), *Lygaeus kalmii* Stal., *Tetraopes tetraophthalmus* Foster, and *Chrysochus auratus* Fab. Intensive observations of insects visiting milkweed plants, *Asclepias syriaca*, at College Park, Maryland, were made in June, July, and August, 1958. Some fifty plants in various stages of growth were selected and observed for the most part at weekly intervals. Repeated observations were made on most of the plants. Population estimates were made, and information on the feeding activity of the insects was recorded. A large number of insects land on milkweed plants for unexplained reasons.

Altogether 67 species belonging to 47 families in 9 orders were observed. Lists of the species are available on request from the second author.

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